

FIG. 1.

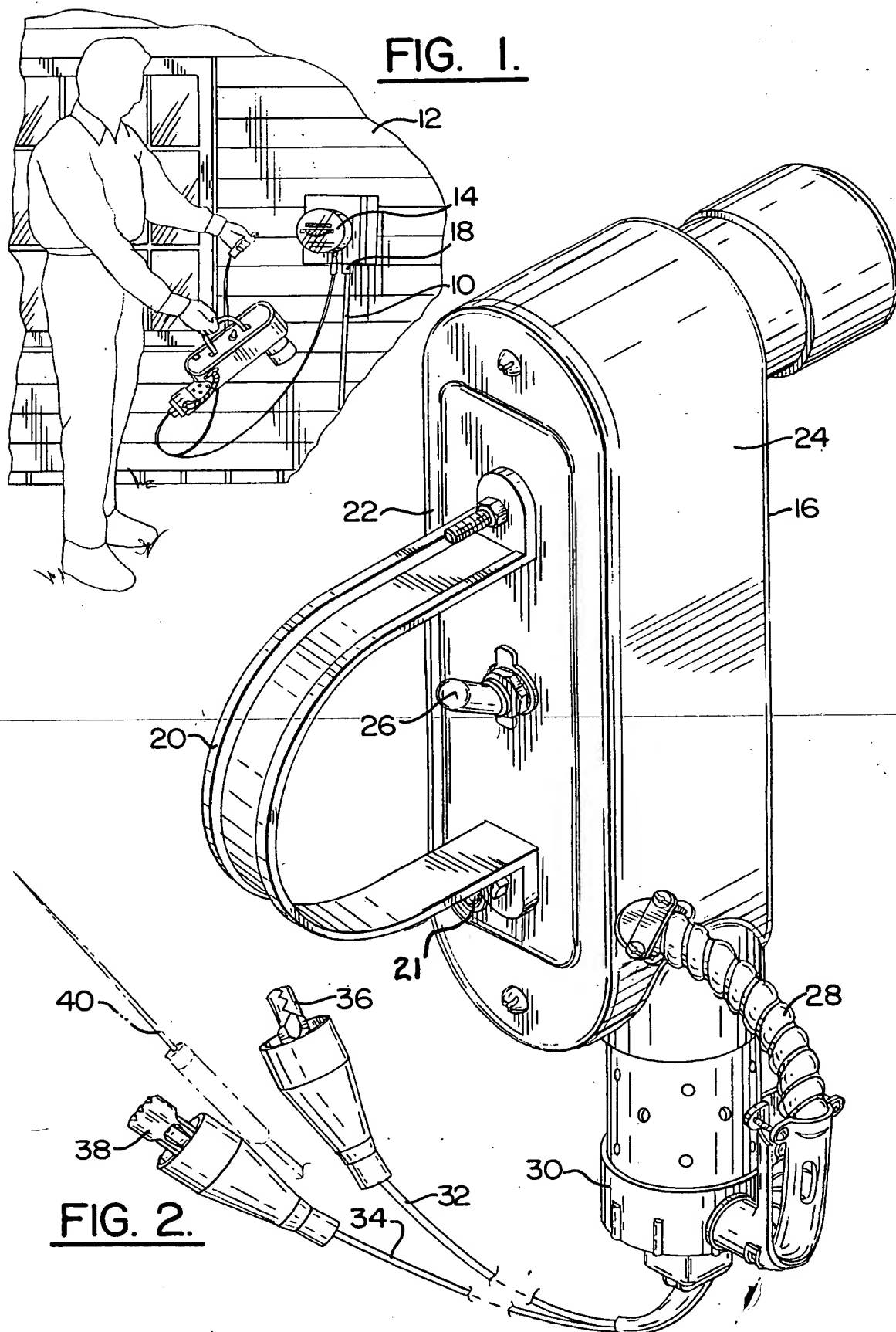


FIG. 2.

FIG. 3.

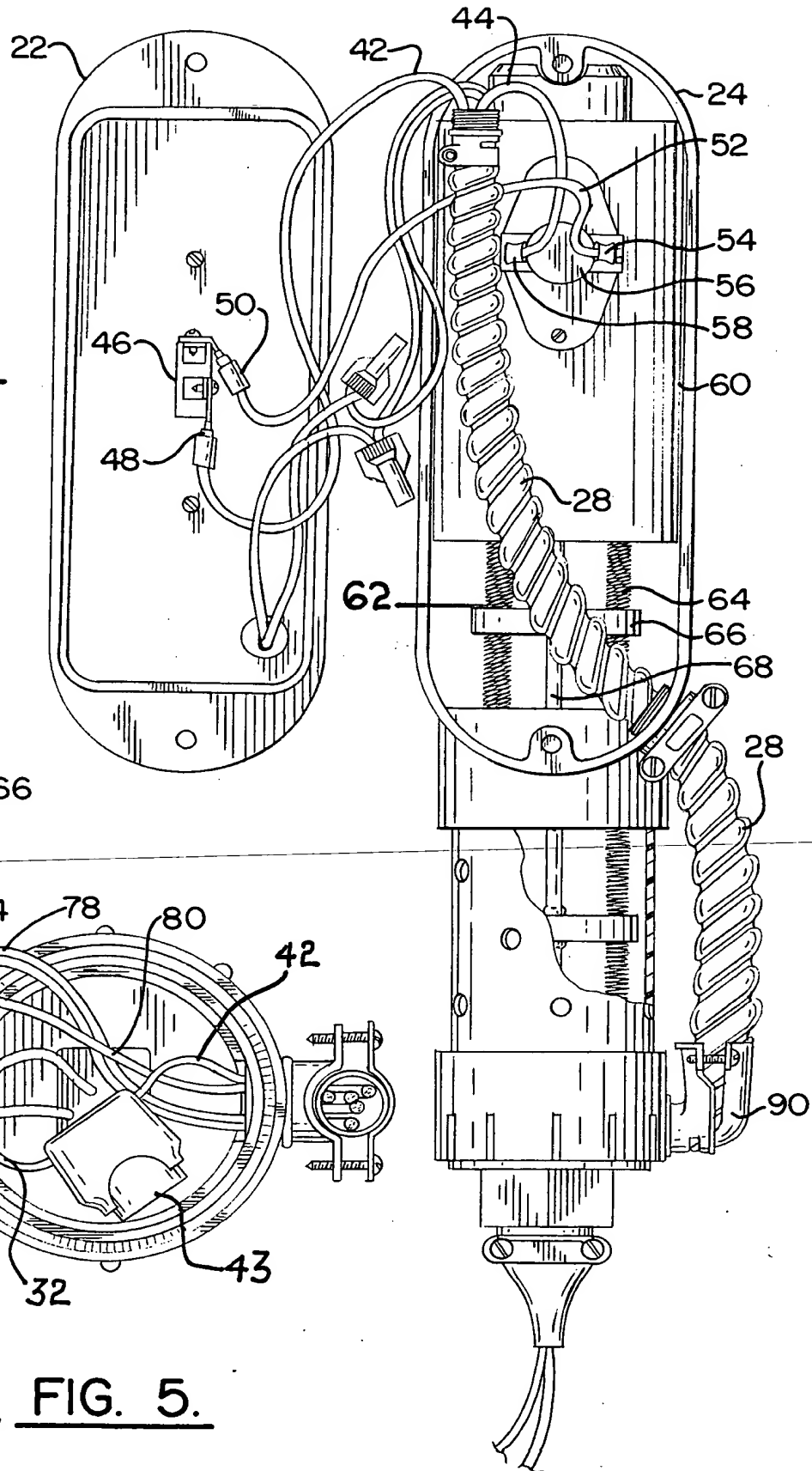


FIG. 4.

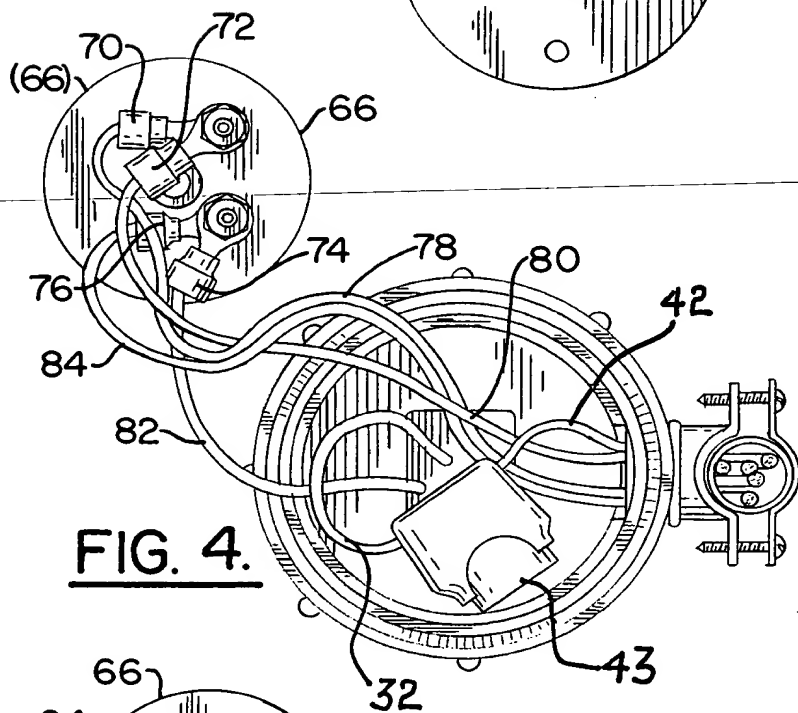
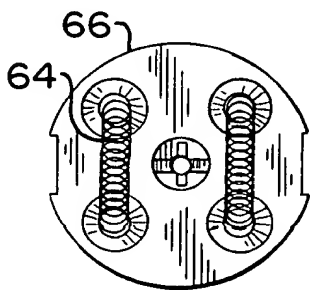


FIG. 5.



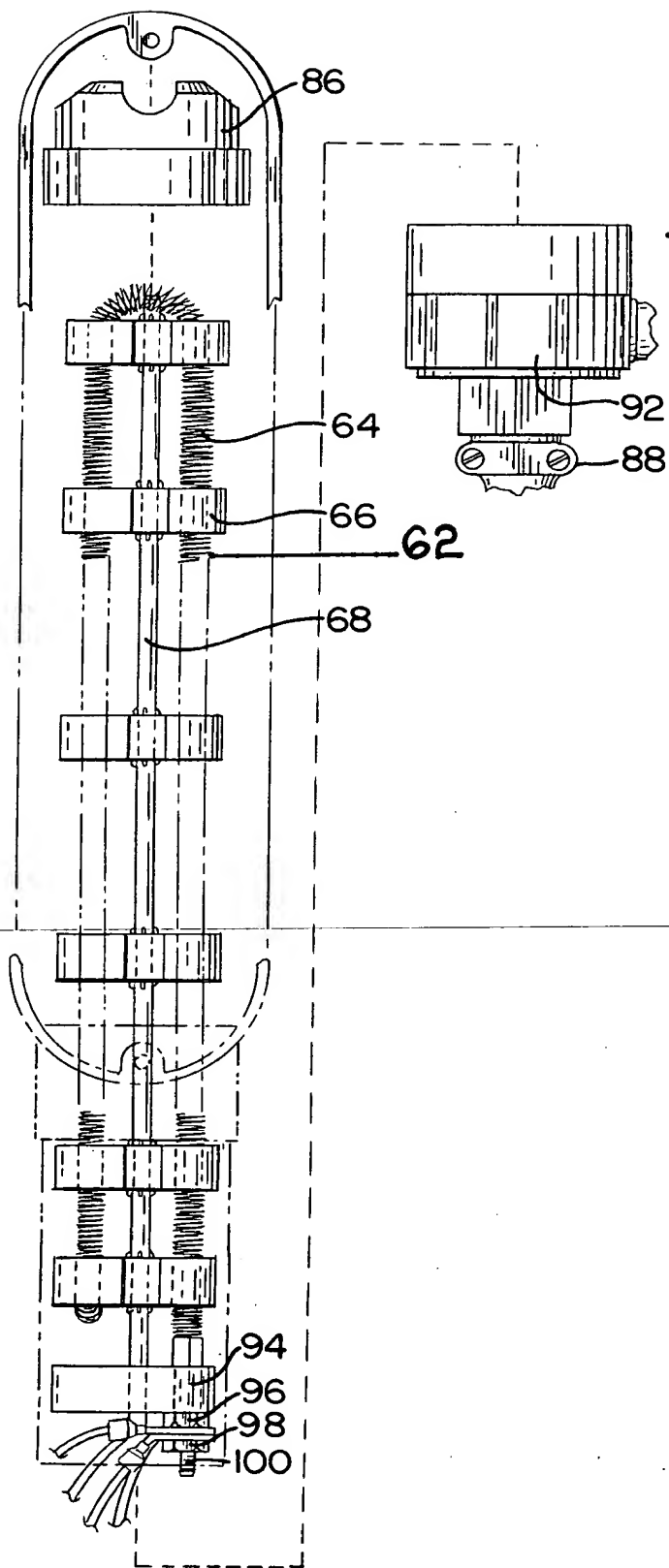


FIG. 6.

installation consisting of a service entrance conductor 10 which provides electric service to the building 12 after passing through a watt hour meter 14. The illustrated field worker is holding the tester device of the present invention in his right hand and preparing to connect the tester to the load with a clip held in his left hand having already grounded the tester to meter 14 with another clip at ground 18 (which could be the box of meter 14). This illustration is exemplary only as to the electric service, the meter, the worker, and the building since the invention concerns itself with the testing device and method of testing a watt hour meter.

Referring now to FIG. 2, an enlarged scale illustration of tester 16 more clearly shows the handle 20 mounted to the cover 22 which is attached to the case 24. Under handle 20 on cover 22 is a switch 26 which may be of the toggle type. At the lower portion of case 24, conduit 28 protrudes and reenters case 24 at bottom cap 30. From bottom cap 30 extend a first line 32 and a second line 34. First line 32 is attached to first clip 36 and second line 34 is attached to second clip 38. While the device has been depicted with clips, it should be apparent that one or more probes may be substituted for one or both clips. Shadowed in near second clip 38 in this illustration is an optional probe 40 which may replace either or both of clips 36 and 38, depending on the type meter to be tested by tester 16.

In FIG. 3, cover 22 has been laid open to reveal the continuation of conduit 28 housing first switch wire 42. Switch wire 42 is connected to switch 26 (not visible in this illustration as switch 26 is on the other side of cover 22) at a connector 46 by a compression clamp 48. At connector 46, a second compression clamp 50 connects switch 26 with a second wire 52 which also connects by a bladed connector 54 to a thermostat 56. To complete the circuit through thermostat 56, another bladed connector 58 connects thermostat 56 to a thermostat wire 44 which travels into conduit 28. Behind a flashing 60, which most preferably is made of aluminum, is an element 62 made of steel coils 64 held in place by porcelain insulators 66 on a support rod 68 continues the circuit. Element 62 may be a dry water heater element of the type commercially available today.

FIG. 4 depicts the various wires and connections in the lower portion of tester 16.

The lowermost insulator 66 of element 62 is connected by a first compression connector 70, a second compression connector 72, a third compression connector 74, and a fourth compression connector 76 to a ground wire 78, a first light wire 80, a circuit wire 82, and a second light wire 84, respectively. These wires collectively pass through a flex connector 90 (illustrated in FIG. 3) to unite with switch 26, thermostat 56, and a light 21. First light wire 80 and second light wire 84 feed to [a] light 21 [(not depicted)] (see FIG. 2) in cover 22. [The l] Light 21 will glow when the circuit is complete. Circuit wire 82 completes the circuit of switch 26, thermostat 56, element 62, first clip 36 and second clip 38, and meter to be tested. When first clip 36 and second clip 38 are clipped to the meter to be tested, switch 26 may be activated, allowing element 62 to create resistance which registers as a turning eddy current disc in an operational meter. [The l] Light 21 in cover 22 glows as an indication of a complete circuit.

FIG. 5 illustrates the uppermost insulator 66 of element 62. Coils 64 loop back through insulator 66 at this location. Referring to FIG. 6, the looping of coils 64 is also depicted in another orientation. Support rod 68 holds several spaced insulators 66 which carry coils 64. Also depicted is an insulator 86, placed above element 62 to deflect heat given off during the testing of a meter. Insulator 86 may be made of any suitable heat-resistant material. At the other end of tester 16, a screw-on cap 92 carries a wire connector 88 which serves to carry first line 32 and second line 34. Above and inside cap 92 is located a lowermost insulator 94 (also depicted as insulator 66 in FIG. 4) with